

**DIRECT TESTIMONY**

**of**

**David A. Borden**

**Energy Division**

**Illinois Commerce Commission**

**Illinois Commerce Commission v. Resource Technology Corporation**

**Citation to show cause for continued QSWEF Certification of Pontiac Facility and  
to investigate compliance with final order in Dockets 97-0031 through 97-0045  
Consolidated**

**Resource Technology Corporation – Pontiac Facility**

**Docket No. 02-0461**

**October 7, 2004**

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10 **Q. Please state your name and business address.**

11 A. My name is David A. Borden. My business address is 527 East Capitol Avenue,  
12 Springfield, Illinois, 62701.

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14 **Witness Qualifications and Education Background**

15 **Q. Please briefly state your qualifications and education background.**

16 A. In 1986, I graduated from the University of Texas at Austin with a Bachelor of  
17 Arts degree in Economics. In 1989, I graduated from Texas A&M University,  
18 College Station, Texas with a Master of Science degree in Economics. I have  
19 been employed by the Illinois Commerce Commission ("ICC" or the  
20 "Commission") since June, 1990.

21

22 I began work for the Commission as an Economic Analyst II in the Rate Design  
23 Department of the Public Utilities Division. In December 1992, I was hired as an  
24 Economic Analyst III by the Water and Sewer Program of the Office of Policy and  
25 Planning. In September 1996, I transferred to the Energy Program of the Office  
26 of Policy and Planning as an Economic Analyst III. In January 1998, I was hired  
27 as an Executive Assistant to Commissioner Richard Kolhauser. I provided policy  
28 and technical analysis for Commissioner Kolhauser on all energy,  
29 water/wastewater and transportation matters before the Commission.

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In January 2000, I was hired as an Economic Analyst IV by the Energy Division.  
I have previously testified on behalf of Staff in numerous dockets concerning  
energy and water/wastewater issues.

## **Purpose of Testimony and Recommendations**

**Q. What is the purpose of your direct testimony?**

A. The purpose of my testimony is to address allegations levied against Resource  
Technology Corporation ("RTC") and its operation of a qualified solid waste  
energy facility ("QSWEF") at the Livingston Landfill located in or near Pontiac,  
Illinois ("RTC Pontiac"), and to recommend appropriate action to the  
Commission.

**Q. What are the allegations that are the basis for the Citation proceeding  
against RTC Pontiac?**

A. In it's Citation Order, the Commission states:

The Staff Report details the significant additions to generating capacity at  
the Pontiac facility and also the significant increase  
in electricity sales to Commonwealth Edison Company ("Edison"). As  
noted in the Staff Report, the additional generating capacity and the  
possible significant use of natural gas, rather than landfill-generated  
methane gas, to generate power could constitute a  
variance from the requirements of Section 8-403.1.

In addition, the Final Order requires RTC to file bi-annual reports  
regarding its energy producing facilities and annual reports regarding  
reimbursements providing information specified in the prefatory portion of  
the Final Order. See Finding 7 of the  
Final Order. The Staff Report indicates that RTC has not filed any of the  
required reports. (Order pp. 1-2, July 10, 2002)

The purpose of the Citation proceeding can be summarized as seeking resolutions to the following questions:

- 1) Does RTC Pontiac violate a Commission imposed limit on generating capacity from Docket Nos. 97-0031 – 97-0045, consolidated?
- 2) Does RTC Pontiac violate the law's requirement that its primary fuel source be landfill methane?
- 3) Does RTC Pontiac violate the Commission's requirement, in Docket Nos. 97-0031 – 97-0045, consolidated, that it file bi-annual reports regarding its energy production facilities and annual reports regarding the status of its reimbursement fund?

**Q. What are your conclusions with respect to the questions that form the basis for the Citation proceeding?**

A. 1) RTC Pontiac does not violate a Commission imposed limit on generating capacity from Docket Nos. 97-0031 – 97-0045, consolidated, because the Illinois Appellate Court ruled that the Commission did not impose the alleged 10 MW capacity restriction on RTC Pontiac. (See Docket No. 02-0455, Commonwealth Edison Company ("ComEd") Petition for Declaratory Ruling.)

2) RTC Pontiac's usage of natural gas constitutes a violation of the requirement that landfill methane be the QSWEF's primary fuel source. This conclusion is based on the assumption that Federal law is a reasonable basis for defining primary fuel under Section 8-403.1, which I recommend later in my

testimony, and upon the testimony of Staff's expert witness, Mike Carolan.

3) RTC Pontiac has submitted the required bi-annual and annual reports ,  
and the dates on the documents indicate that RTC Pontiac is in compliance with  
the Commission's Orders.

**Q. What are your Recommendations to the Commission?**

A. My recommendations are as follows:

1) I recommend that the Commission find that the amount of electric  
generating capacity at RTC Pontiac does not violate the Commission's Order in  
Docket Nos. 97-0031 – 97-0045, consolidated;

2) I recommend that the Commission find that as a result of RTC Pontiac's  
usage of natural gas, that RTC Pontiac does not use landfill methane as its  
primary fuel source. I recommend that the Commission revoke the QSWEF  
approval status of RTC Pontiac as a penalty for this violation.

3) In the event that RTC Pontiac's QSWEF status is not revoked by the  
Commission, then I recommend that the Commission initiate a proceeding to  
determine the appropriate compliance measures that are necessary to ensure  
that landfill methane remains RTC Pontiac's primary fuel source on an ongoing  
basis and to ensure that RTC Pontiac does not receive the retail rate payment for  
kWhs generated by the use of natural gas.

4) Regardless of whether the Commission revoke's RTC Pontiac's QSWEF status, I recommend that the Commission Order RTC Pontiac to immediately repay to the Commission, \$3,830,318.47, which is the amount that I estimate that RTC Pontiac received for power sold in 2002, that is in excess of the utility's avoided cost, by the use of natural gas and in violation of the law;

5) Regardless of whether the Commission revoke's RTC Pontiac's QSWEF status, I recommend that the Commission Order RTC Pontiac to immediately repay to the Commission \$1,457,005.79, which is the amount that I estimate that RTC Pontiac received for power sold in 2003, that is in excess of the utility's avoided cost, by the use of natural gas and in violation of the law;

6) I recommend that the Commission find that RTC Pontiac is in compliance with the bi-annual and annual reporting requirements set forth in Docket Nos. 97-0031 – 97-0045, consolidated. RTC provided copies of the documents that were apparently sent to Staff in the past, in compliance with the Commission's Orders.

## **Recommendation 1: Generating Capacity**

**Q. Please explain why you recommend that the Commission find that the amount of electric generating capacity at RTC Pontiac does not violate the Commission's Order in Docket Nos. 97-0031 – 97-0045, consolidated.**

**A.** Based on advise of counsel, a recent Appellate court decision on the amount of capacity that RTC Pontiac can sell at the retail rate precludes the Commission

from pursuing this issue in the citation proceeding.

In July 2002, ComEd petitioned the Commission for a declaratory ruling as to whether ComEd was obligated to purchase power from RTC Pontiac, at the rate set forth in Section 8-403.1(c) of the Act, (“the Retail Rate”), for power greater than 10 MWs. (ComEd Petition, Docket No. 02-0455) On September 4, 2002, the Commission issued an Order in Docket 02-0455, ruling that ComEd was not obligated to purchase power from RTC Pontiac at the retail rate for power greater than 10 MWs. In January 2004, the Appellate Court First District, State of Illinois, issued a mandate to the Commission that reverses the Commission’s Order in Docket No. 02-0455. (343 Ill. App.3d 37(2003)) It is my understanding, from a review of this mandate, that based upon the Commission’s Order in Docket Nos. 97-0031 – 97-0045, consolidated, the Commission cannot limit the amount of capacity installed by RTC Pontiac, as a QSWEF, to 10 MW.

## **Recommendation 2: Primary Fuel and QSWEF Status**

**Q. Please explain why you recommend that the Commission find that as a result of RTC Pontiac’s usage of natural gas, that RTC Pontiac does not use landfill methane as its primary fuel source under Illinois law?**

**A.** Although I am not an attorney, Section 8-403.1(b) of the Act requires that a QSWEF, as approved by the Commission, must use landfill methane as its primary fuel. Although the term “primary fuel” is undefined, I recommend that the Commission give reasonable meaning to the term “primary fuel” by evaluating



RTC Pontiac's usage of fuel through the Federal law governing Qualifying Facilities ("QFs"). The Federal law is reasonable for the Commission to utilize because a QSWEF, per Section 8-403.1(b) of the Act, must possess characteristics that would enable it to qualify as a cogeneration or small power production facility under Federal law. It is my understanding that there has been extensive litigation regarding the meaning of the Federal law, and Staff recommends that the Commission utilize the Federal law in a manner that is consistent with 16 U.S.C. Section 796(17)(A) and (B), 18 CFR Section 292.204(b) and the United States Appellate Court's ruling in, Southern California Edison Company, Petitioner v. Federal Energy Regulatory Commission, Respondent; Laidlaw Gas Recovery Systems, Inc., Intervenor, No. 98—1439 Unites States Court of Appeals for the District of Columbia Circuit. (338 U.S. App. D.C. 402; 195 F.3d 17; 1999 U.S. App. LEXIS 28140; 30 ELR 20175) The specifics of this argument will be provided in Staff's Brief. The Federal law that should be utilized by the Commission states:

(2) Use of oil, natural gas and coal by a facility, under section 3(17)(B) of the Federal Power Act, is limited to the minimum amounts of fuel required for ignition, startup, testing, flame stabilization, and control uses, and the minimum amounts of fuel required to alleviate or prevent unanticipated equipment outages, and emergencies, directly affecting the public health, safety, or welfare, which would result from electric power outages. Such fuel use may not, in the aggregate, exceed 25 percent of the total energy input of the facility during the 12-month period beginning with the date the facility first produces electric energy and any calendar year subsequent to the year in which the facility first produces electric energy. (18 CFR 292.204(b))

In order to provide the Commission with an expert opinion of RTC Pontiac's specific usage of fuel under Federal law, Staff has employed the services of Mike Carolan, an engineer with extensive professional experience in the QSWEF industry in Illinois as an owner and President of QSWEFs. Mr. Carolan's testimony addresses the specifics of RTC Pontiac's usage of natural gas and it is Mr. Carolan's testimony that RTC Pontiac's use of natural gas does not comply with the permitted uses set forth in the Federal law.

**Q. Should the Commission seek a determination from FERC that RTC Pontiac is in violation of Federal law?**

A. No. The Commission has jurisdiction over QSWEFs—not FERC. If the Commission were to revoke the QSWEF status of RTC Pontiac, such a ruling would not change RTC Pontiac's self-certification status as a QF and RTC Pontiac would still be entitled to receive the Federally provided avoided cost rate for their power sales to utilities.

**Q. Please explain why you recommend that the Commission revoke the QSWEF approval status of RTC Pontiac as a penalty for the violation of Illinois law?**

A. RTC Pontiac's QSWEF status should be revoked in order to protect tax payers from paying above market rates for power, and to serve as a deterrent to this behavior for other QSWEFs.

Section 8-403.1(c) of the Act requires an electric utility to enter into long-term contracts with a QSWEF to purchase the QSWEF's output at the retail rate.

Pursuant to Section 8-403.1(d) of the Act, the purchasing utility is allowed to take a tax credit against the amount that it owes under the Electricity Excise Tax law for the difference between the retail rate and the then current rate at which the utility must purchase the output of QFs, pursuant to the federal Public Utility Regulatory Policies Act of 1978 ("PURPA"). The PURPA purchase rate for a QF is commonly referred to as a public utility's "avoided cost" for power. The Commission's rules, 83 Illinois Administrative Code Part 430 define avoided cost as:

"Avoided costs" means the incremental costs to the electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, the utility would generate itself or purchase from another source (18 CFR 292).

ComEd, the purchasing utility in the instant proceeding, determines its avoided cost according to the terms that it pays for power under a Power Purchase Agreement ("PPA") that ComEd negotiated with a wholesale supplier. The PPA is a full requirements contract, meaning that the entire load served by ComEd must be met per the terms of the PPA, including any incremental swings in electric energy or capacity.

When ComEd pays more than the price of their PPA for electricity (or their avoided cost) from a QSWEF, they are essentially paying an above market price for power. ComEd is not harmed by this above market purchase because under

the QSWEF law the State provides a direct offset to the above market purchases via the tax credits for the amount paid that exceeds ComEd's avoided cost.

The legislature, through the enactment of Section 8-403.1 of the Act, has determined that such above market purchases are warranted for QSWEFs that use landfill methane as their primary fuel source. For example, Section 8-403.1(a) of the Act states:

It is hereby declared to be the policy of this State to encourage the development of alternative energy production facilities in order to conserve our energy resources and to provide for their most efficient use.

Since RTC Pontiac does not meet this primary fuel standard the State is wasting resources by subsidizing power purchases that ComEd would otherwise procure more cost effectively through its PPA, and the State is providing subsidies to methods of power production that are ineligible under the legislation.

**Q. Is a QSWEF considered to be an alternative energy production facility?**

A. Yes, if it is fueled by landfill methane. Utility load in Illinois has been commonly served by a diverse generation portfolio fueled by nuclear, coal, natural gas, and oil. Since the passage of the Electric Service Customer Choice and Rate Relief Law of 1997, Illinois has experienced a dramatic increase in investment in large natural gas fueled generators. Given that there appears to be a market for natural gas supplied power in Illinois without a State subsidy, and that Section 8-403.1 of the Act expressly limits the retail rate payment to QSWEFs that are fueled by landfill methane, it would be disingenuous to claim that the legislature

intended, through the QSWEF law, to pay an above market subsidy for alternative energy production facilities that are fueled by natural gas. Because the capital cost of natural gas generation is typically lower than for other fuels, but its fuel cost is higher, natural gas generation is typically reserved for peaking use, for a few hours per year when wholesale electric prices are high. However, RTC Pontiac, receiving the retail rate for the natural gas fired generation, found it profitable to run its natural gas unit continuously and at times when the fuel cost exceeded the wholesale power price. I think it is safe to say that the legislature did not intend for QSWEFs to be fueled by nuclear fuel or coal for that matter either, and that the alternative energy production facility referred to in the law is one that is fueled by landfill methane.

### **Recommendation 3: Compliance Measures for Natural Gas Usage**

**Q. Please explain why you recommend that in the event that RTC Pontiac's QSWEF status is not revoked by the Commission, that the Commission initiate a proceeding to determine the appropriate compliance measures that are necessary to ensure that landfill methane remains RTC Pontiac's primary fuel source on an ongoing basis and to ensure that RTC Pontiac does not receive the retail rate payment for kWhs generated by the use of natural gas.**

**A.** The rationale for commencing a proceeding to establish the compliance measures is to ensure, as best as one can, that the State does not pay the subsidized rate (or above market rates) for power generated by natural gas. In

addition, since the scope of the Citation Order does not include establishing ongoing compliance measures, I will not recommend such measures at this time in this proceeding. But if RTC Pontiac wishes to propose compliance measures in their direct testimony, then I will address the issue in my rebuttal testimony. If no compliance measures are proposed by RTC Pontiac and the Commission does not revoke their QSWEF status, then the Commission should address the issue through a separate proceeding that commences at the conclusion of the instant proceeding.

#### **Recommendation 4: Estimate of 2002 RTC Pontiac Repayment**

**Q. Please explain how you estimated the 2002 dollar amount that must be repaid by RTC Pontiac for using natural gas in 2002, in violation of the law, to generate power that was sold to ComEd at the retail rate?**

**A.** Based upon the testimony of Staff witness Carolan, and from my review of the Solar Reports, it is apparent to me that the Titan Unit was the only generating unit that utilized natural gas in 2002 and was not utilize landfill gas. As such, all money received for power delivered from the Titan Unit to ComEd, and sold at the retail rate, in excess of ComEd's avoided cost rate, should be repaid to the State. I used data provided by RTC Pontiac for the Titan Unit for 2002, and overall 2002 sales to ComEd by RTC Pontiac to calculate the amount that should be repaid by RTC Pontiac for 2002.

ICC Staff Exhibit 2.01 sets forth my estimate for the 2002 dollar amount repayment that RTC should make as a result of using natural gas to generate electricity. I started with the retail rate payment from ComEd and subtracted ComEd's avoided cost rate to arrive at the subsidy rate that is paid to RTC Pontiac, ICC Staff exhibit 2.01, columns (E) and (F). I then calculated a weighted average subsidy rate based upon the overall split between peak and off-peak sales by RTC Pontiac. I applied the weighted average subsidy rate to the amount of power delivered to ComEd from the Titan Unit to arrive at the \$ amount that is set forth in column (H) on ICC Staff Exhibit 2.01, this amount in total is \$3,830,318.47.

ICC Staff exhibit 2.02 sets forth 2002 peak/off-peak sales from RTC Pontiac to ComEd and forms the basis for the weighted average subsidy rate on ICC Staff Exhibit 2.01, column (G).

ICC Staff Exhibit 2.03 sets forth 2002 natural gas usage by RTC Pontiac and the resulting power delivered to ComEd. I applied the weighted average subsidy rate set forth on ICC Staff Exhibit 2.01, column (G), to the power delivered to ComEd set forth on ICC Staff Exhibit 2.03, column (E), to arrive at the total \$ amount to be repaid by RTC Pontiac that is set forth on ICC Staff Exhibit 2.01, column (H).

Since RTC Pontiac used natural gas illegally they should be required to repay the State for the cost of their power sales that were fueled by natural gas and that

exceed the utility's avoided cost. The amount set forth on ICC Staff Exhibit 2.01 should be repaid to the Commission by RTC Pontiac within 30 days of the issuance of a Final Order in this proceeding. Had RTC Pontiac petitioned the Commission for a determination on the fuel usage issue, prior to using natural gas in their generator sets, then the issues could have been resolved and the instant proceeding could have been unnecessary.

**Q. Are you aware of any other QSWEF in Illinois that utilizes natural gas as its fuel source?**

A. Yes, but only one and that facility is owned and operated by RTC at the Congress-Hillside landfill. Once Staff learned that RTC Pontiac and later RTC Congress-Hillside were using natural gas to fuel their generators, Staff began requiring, in Commission Orders approving QSWEF petitions, prohibitions on the use of fuel other than landfill methane by a QSWEF without first receiving Commission approval.

## **Recommendation 5: Estimate of 2003 RTC Pontiac Repayment**

**Q. Please explain how you estimated the 2003 dollar amount that must be repaid by RTC Pontiac for using natural gas in 2003, in violation of the law, to generate power that was sold to ComEd at the retail rate?**

A. Based upon Mr. Carolan's testimony, my review of the Solar Reports, and my review of natural gas bills provided to RTC Pontiac, it is apparent that only the Taurus Units generated power in 2003 at RTC Pontiac and that only the Taurus units consumed natural gas. I estimated the amount of power deliver to ComEd



that was generated by the use of natural gas and applied the subsidy rate to arrive at the total dollar amount that must be repaid for 2003. Since the Taurus Units are connected to the landfill gas system I used the monthly heat rate of the combined plants to estimate the amount of power generated by the use of natural gas. ICC Staff Exhibit 2.04, column (H), sets forth the total amount to be repaid by RTC Pontiac for 2003, which is \$1,457,005.79. Again, I subtracted the utility avoided cost from the retail rate to determine the subsidy rate and then calculated a weighted average subsidy rate based upon 2003 peak/off-peak sales to ComEd. ICC Staff Exhibit 2.05 sets forth my calculation of the split between peak/off-peak hours that is used to determine the weighted average subsidy rate on ICC Staff Exhibit 2.04, column (G). I applied the rate set forth on ICC Staff Exhibit 2.04, column (G), to my estimated amount of power sold by using natural gas that is set forth on ICC Staff Exhibit 2.06, column (J). ICC Staff Exhibit 2.06, column (J), sets forth my estimate of the amount of kWhs sold in 2003 by using natural gas. I used the actual combined monthly heat rates that can be calculated from the data provided in the Solar Reports to convert natural gas used into gross power produced. I reduced the gross power produced by the parasitic load set forth in the Solar Reports to determine net power delivered to ComEd by use of natural gas.

**Recommendation 6: Compliance with Reporting Requirements**

**Q. Please explain why you recommend that the Commission find that RTC Pontiac is in compliance with the bi-annual and annual reporting requirements set forth in Docket Nos. 97-0031 – 97-0045, consolidated?**

A. Because subsequent to the initiation of this docket, Staff received the reports that are required to be filed by RTC Pontiac, per the Commission's Order. The documentation indicates to me that the reports were apparently sent to Staff in the past, in compliance with the Commission Orders. I have no basis to doubt the veracity of the dates on the reports and recommend that the Commission find that RTC Pontiac is in compliance with its filing requirements.

**Q. Does this conclude your direct testimony?**

A. Yes.